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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,574	07/19/2005	Volkmar Menger	12810-00111-US	6965
23416 7590 12/28/2007 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899				
EXAMINER				
SMITH, JENNIFER A				
ART UNIT		PAPER NUMBER		
4116				
MAIL DATE		DELIVERY MODE		
12/28/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/542,574

Applicant(s)

MENGER ET AL.

Examiner

JENNIFER A. SMITH

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-2, 4-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 and 5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/55/02)
Paper No(s)/Mail Date 07/19/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Status of Application

Claim 3 has been canceled.

Claims 1-2, 4-5 are presented for examination.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed of the German patent application with a priority date of 01/20/2003 has been filed.

Information Disclosure Statement

The information disclosure statement (IDS) was submitted on 07/19/2005. The submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner. Please refer to applicants' copy of the 1449 submitted herewith.

Declaration

37 CFR 1.63 requires that an oath or declaration identify the specification to which it is directed. The declaration form suggested by the Office includes spaces for filling in the names of the inventors, title of the invention, application number, filing date, and foreign priority application information. While this information should

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be provided, it is not essential that all of these spaces be completed in order to adequately identify the specification in compliance with 37 CFR 1.63(b)(1).

The title is not present on the declaration form.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

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The spacing of the lines of the specification is such as to make reading difficult. New application papers with lines 1½ or double spaced on good quality paper are required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2, 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "working up" in claims 1, 4, and 5 is a relative term which renders the claim indefinite. The term is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear what process applicant's invention is drawn to. Therefore, one would not know what the metes and bounds of the claims are.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-2, 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller et al. US Patent No. 4,480,124 in view of Menger et al. US Patent No. 6, 713, 422 B1.

Claim 1 is drawn to a process for working up a hydrogenation catalyst which has been used for the color number hydrogenation of PTHF and/or PTHF esters. The process comprises purifying a hydrogenation catalyst comprising nickel, cobalt, iron, ruthenium, palladium, platinum or copper by treatment with steam at from 100 to 250°C and a gauge pressure of from 0 to 40 bar.

Claim 2 is drawn to process as claimed in claim 1, wherein the hydrogenation catalyst is a supported catalyst.

Claim 4 is drawn to the process as claimed in claim 1 for working up hydrogenation catalysts for the color number hydrogenation of PTHF monoacetate and/or PTHF diacetate.

Claim 5 is drawn to the process as claimed in claim 2 for working up hydrogenation catalysts for the color number hydrogenation of PTHF monoacetate and/or PTHF diacetate.

Mueller et al. (D1, henceforth) teaches a technique for implementing the hydrogenating treatment of polymers for the removal of the color and for reducing the acid number. [Column 4, lines 24-27]. The polymers are one of polytetramethylene ether glycols or diesters [Column 2, line 48]. Suitable hydrogenation catalysts contain the metals of the eighth sub-group of the Periodic Chart, particularly nickel, cobalt, an iron as well as the noble metals ruthenium, palladium or platinum, and copper. [Column 4, lines 9-12]. The catalysts containing the hydrogenation metals are on suitable supports such as aluminum oxide, silicon oxide, etc. [Column 4, lines 15-17]. Technical grade THF is used for the polymerization and a polytetramethylene ether glycol diacetate is produced [Column 5, lines 34-36]. This compound is substantially similar to PTHF diacetate as claimed in claims 4 and 5 when using the standard of broad interpretation. Finally, D1 teaches the polymers can be treated with hydrogen in the presence of hydrogenation catalysts [Column 3, lines 60-62]. The pressure of this

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operation is preferably 15 bar to 50 bar and the temperature is 20 to 60°C but it is noted that the temperature increase does not offer significant advantages compared with operations at or below room temperature.

D1 fails to teach the treatment with steam vapor at a temperature of 100 to 250°C.

Menger et al. (D2, hereafter) teaches this process for silicate catalysts and the catalyst is treated with steam at 80 to 250°C and a pressure of 0.5 to 40 bar in

Abstract.

One of ordinary skill in the art would be motivated at the time of invention to modify the process in D1 in view of D2 because simple substitution of one known free flowing gas (hydrogen gas) for another (steam) would achieve the predictable result of enhancing the purification of the deactivated catalyst and allowing for a quick and inexpensive change of catalyst and a worked-up catalyst which is largely free of product residues can readily be handled in subsequent disposal. [See **Column 1, lines 41-45 of D2**] Additionally the higher temperature in claim 1 which is not taught in D1 is due to the fact that steam must be maintained above 100°C.

Conclusion

Claims 1-2, 4-5 are rejected.

Claim 3 is canceled.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Smith whose telephone number is 571-270-3599. The examiner can normally be reached on Monday - Friday, 8:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on 571-272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jennifer A. Smith
December 14, 2007, TC 4116

/Vickie Kim/
Supervisory Patent Examiner, Art Unit 4116

